KENTUCKY ECONOMIC FORECAST

Frankfort, Kentucky
August 2001

The Governor's Office for Economic Analysis (GOEA) is responsible for analyzing the economy of the Commonwealth of Kentucky and the United States. At the heart of this endeavor is a dynamic response econometric model that forecasts the economic outlook for Kentucky.

GOEA will release forecasts of the Kentucky economy every quarter in the first month of each quarter.

Just as the economic outlook detailed in this report helps the Office of State Budget Director in planning for the future, we hope it serves a similar purpose to a broader audience.

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We Are Not in Recession…But We Might Be!

The U.S. economy is at a turning point. It just isn't clear which way it's turning.

No, that's not a deep philosophical statement rife with hidden meaning. It's merely a statement of fact. The national economy may have just stalled temporarily because the dot.com phenomenon fizzled. Or we are in a recession because fundamentals like productivity, growth, and aggregate demand have not found a happy equilibrium. Either way it feels a lot like a recession, because real GDP growth this year is expected to be a fraction of the robust 5.0 percent growth we experienced last year.

The story is a little different in Kentucky. There are no state-level measures of recession, so it's impossible to say objectively if the state is in recession. However, the current national slowdown is mostly in manufacturing, and that's a key sector for the Kentucky economy. During the last national recess in 1991 Kentucky's manufacturing employment declined by 2.4 percent, this time around the decline is already in the 4 percent range. So even if we don't use the "R" word it's safe to say that Kentucky is experiencing some major restructuring.

The best way to understand what's happening is to revisit ECON 101. Real gross domestic product (GDP) is the sum of consumption, investment, government spending, and net exports, i.e. GDP = C + I+ G +X. To avoid a recession every component of this equation has to do its bit for the economy.

Consumers have been doing their part, albeit not as recklessly as last year. During the first quarter of 2000 real consumption was up 7.6 percent while real disposable income was up just 1.9 percent. This euphoric, but irrational, spending rate is not easy to sustain without causing an imbalance in the rest of the economy. Government spending is still growing steadily and is expected to increase by 2.8 percent in 2001, exactly the same as last year.

The two problem areas are business investment and net exports. Dampened consumer demand and the shakeout in the high tech industry have made businesses cautious. Until the early part of this year economists couldn't see a downturn coming because investment data was showing strong investment. Recently the Census Bureau revised industrial construction data and the impact will be felt in the August NIPA estimates. For both Kentucky and the national economy the greatest impact is related to investment in the telecommunications industry. The growth rate for 2000 has been lowered from 21 percent to *negative* 4 percent. According to DRI-WEFA, "telecom companies over invested in markets that went bust or did not develop as expected." This impact will be felt not only in the economic outlook, but also in subsequent General Fund sales and property tax forecasts for Kentucky.

The final, but fairly critical component of real GDP is net exports. Japan, the second largest economy in the world, is in a protracted recession. Germany, the third largest, is in a severe slowdown, as is the rest of Europe. Much of Asia is feeling the impact from the slowdown of first world economies. This has not only lowered world production, but severely dampened the demand for capital goods normally exported from the U.S. and especially from Kentucky.

The Good News

The good news is based on the expectation that stimulative monetary and fiscal policy will steer us around a recession. Core inflation is down because of the soft labor market, and energy prices are falling as a consequence of the slowing global economy.

The current quarter is expected to experience a boost of 2 percent in real GDP because of tax rebates, followed by weak growth of just 0.8 percent in the final quarter of 2001 as inventory accumulation levels off. A national turnaround is expected during the first quarter of 2002 as the impact of successive interest rate cuts is felt. By mid-2002 U.S. domestic demand for durable goods is expected to spur further investment in Kentucky's manufacturing sector and eventually lead to increased employment by late 2002.

The next economic expansion phase (2002-2005) is expected to look more like the mid-1990s with annual productivity gains of 1.5 percent instead of the fast-paced growth of 3.0 percent during the latter half of the 1990s. Kentucky's personal income growth for the period 2002-2005 is forecasted to average 5.4 percent and nonagricultural employment 2.0 percent. More importantly, Kentucky's manufacturing job base is expected to recover completely by 2004 to the level of 2000.

National Output

Real GDP, the output of goods and services produced by labor and property in the United States, is forecast to grow by a scant 1.6 percent this year. The meager, though positive growth is dwarfed by the 5.0 percent gain in 2000 and the annual average growth rate of 4.3 percent over the past five years. Many factors are responsible for the rapid growth in the economy during the 1990s. The advent of the New Economy phenomenon of steadily increasing productivity driven by rapid and an unprecedented growth in consumption is the one most often cited for the surge in national output.

As new Census and NIPA data becomes available it seems that industries invested too heavily—and indiscriminately—in certain fast-growing areas like telecommunications and dot-coms with little regard to such factors as return on investment. By late 2000 this resulted in skittish investors and a build-up in inventory. The impact on real GDP was felt not only in the high tech sector, but also in states like Kentucky with large durable goods sectors.

Real GDP is expected to show a slight consumer-led recovery in the July to September quarter as a direct result of the fiscal stimulus package approved by Congress. However, the final quarter of 2001 is

Record-setting U.S. Expansion Slows

expected to be especially weak as inventories are worked down. Business investment will remain soft as real spending on equipment and software has fallen for two consecutive quarters. By early 2002 investment is expected to slowly increase in response to the aggressive monetary policy initiatives of the Fed during much of 2001. By 2002 real GDP is forecasted to grow by 2.6 percent, followed by robust increases in the 3 percent range over the next three years. (See details in table.)

To a large extent the new New Economy will be a much-chastened economy. The era of 8.3 percent growth in real GDP (experienced in 1999Q4) is over for the moment. The stock market seems to have bottomed out, too, though the recovery will be slow.

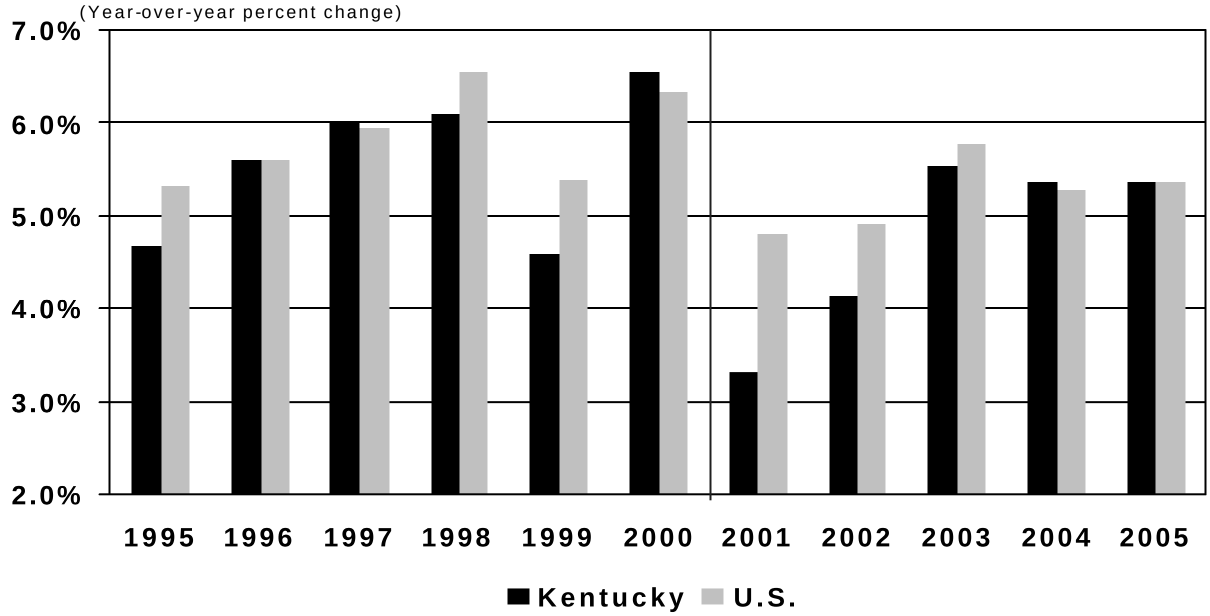
Income

Personal income is the broadest measure of a state's economic performance. It is a measure of the total income of households and businesses. It is an important indicator of the economic well being of Kentucky residents. Between 1990 and 2000 Kentucky's annual personal income growth averaged 5.6 percent—about par with the national average of 5.5 percent. In 2000 personal income in Kentucky increased by an unprecedented 6.5 percent outstripping the U.S. growth of 6.3 percent. This growth was spurred to a large extent by external demands from both the national and global economies. Kentucky's relatively lower wages, low energy costs, and access to global markets through both its major international airports spurred personal income.

By late 2000 and early 2001 the demand for capital goods and durable goods, with the exception of automobiles, had dampened considerably in the world market. This is expected to result in personal income growth of a meager 3.3 percent compared to the national average of 4.8 percent. By mid-2002 Kentucky's economy is projected to start recovering in response to increased investment and demand.

Per capita income is another comprehensive measure of the strength of the economy. In 2000 Kentucky's per capita income is estimated to have been $24,710 or 82.3 percent of the U.S. average. However, the slowdown is expected to dispropor-

Personal Income is Expected to Dip Sharply this Year As the Economy Weakens Further



tionately impact Kentucky and reduce the per capita personal income ratio to 81.4 percent in 2001. In spite of the recovery by 2005 Kentucky's per capita income will remain at about the same proportion of the national average.

Consumer Spending

Nationally, disposable income (i.e., after adjusting for taxes, but not inflation) grew on average by 5.0 percent between 1990 and 1999, compared to 5.2 percent in Kentucky. In 2000 as the economy surged, disposable income in Kentucky grew by 6.2 percent, just a little less than the 6.4 percent growth nationally. Nationally, consumption, measured in nominal dollars, outstripped disposable income with a growth rate of 7.8 percent. This mismatch of income and spending was evident through most of the 1990s fuelled in part by low interest rates, a surging stock market, and perhaps the naïve belief that the party would go on forever. Now, the slowing economy, and an up tick in the unemployment rate has slowed consumption slightly, but it is still expected to exceed income in the near term.

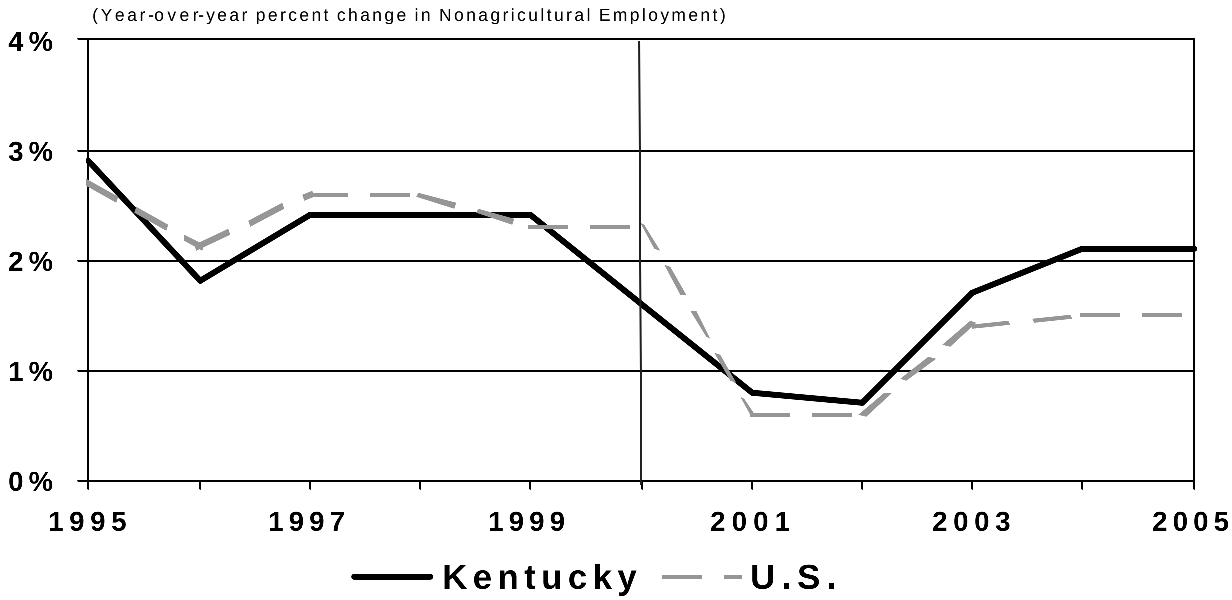
Inflation

Low inflation has been one of the hallmarks of the New Economy. Even as consumer demand has risen dramatically and the tight labor market has pushed wages up, inflation remained well under 3 percent until 2000 when energy prices caused it to rise to 3.4 percent. Over the next few years a soft labor market, lower demand, and a weak global market are the factors that are forecasted to keep inflation in check.

Employment

Total nonagricultural employment in Kentucky is estimated to have increased by 0.8 percent during the first seven months of 2001 for a total of 1,839,600. That growth rate is forecasted to be the average for the year, too, coming in at exactly half the growth of 1.6 percent in 2000. During the ten-year period following the 1991 recession Kentucky added an average of over 35,000 jobs per year. For the next two years an average of just 13,800 will be added to the state economy.

A Sharp Drop in Nonagricultural Employment Growth Followed by A Healthy Recovery



Much of the slowdown results from the recession in the manufacturing sector. Kentucky's employment base is dominated by the manufacturing sector. Almost 17 percent of all nonagricultural employment in Kentucky is in manufacturing, compared to 13 percent for the U.S. Our comparative concentration in manufacturing jobs is a function of relatively low wages, the lowest utility cost in the nation, and relative proximity to major population centers.

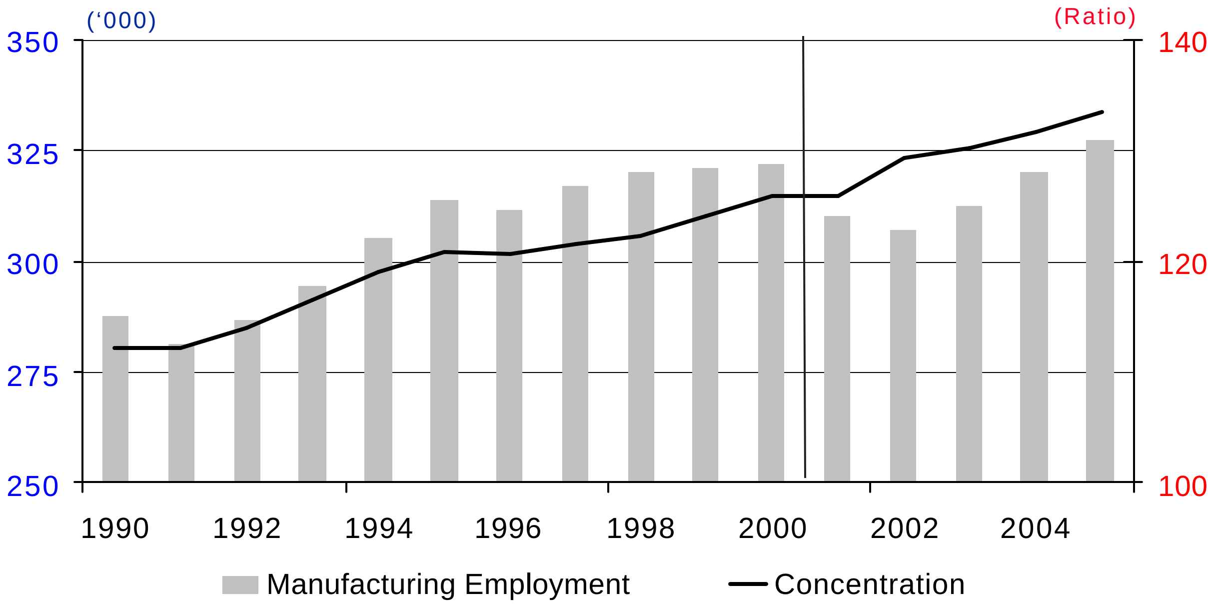
The graph of manufacturing employment and concentration shows how overall manufacturing grew rapidly during the 1990s. The line graph shows the relative concentration of manufacturing in Kentucky's economy compared to the national economy. During the beginning of the current expansion cycle in 1991, our relative advantage in manufacturing jobs was 112. That is Kentucky had about 12 percent more jobs in manufacturing than the national average. By 2000 the concentration had increased to about 126. This trend is expected to continue over the course of the next five years primarily because the national economy is shedding manufacturing jobs, and Kentucky will retain them.

Employment in the manufacturing sector has shrunk by 3.2 percent in the first seven months of this year. By the end of the year the decline is forecasted to be 3.6 percent. Transportation equipment and industrial machinery are the largest components of our manufacturing base. The former has remained flat , and the latter shrunk by 3.4 percent since the beginning of the year. However, recovery in the automobile sector, primarily Toyota, Ford, and ancillary units, is expected by the end of the calendar year. This is driven primarily by low interest rates and ongoing rebates.

The only significant component of the manufacturing sector that has shown growth is the food and kindred products with employment growth of 2.4 percent for year. The nondurable-goods sector in general is expected to lose only 1.5 percent of its base in 2001 compared to 5.0 percent for the durable goods sector. Recovery in nondurable goods is also expected to be faster.

Employment in the construction industry is expected to decline by 0.9 percent in 2001 in contrast to a gain of 2.2 percent nationally. Kentucky's current demographics as well as the manufacturing recession are expected to curtail construction activity even though interest rates are at record lows. Industrial construction is expected to suffer further in 2002

Kentucky is Expected to Retain its' Relative Advantage in Manufacturing



with a contraction of 5.5 percent in the construction employment. Over the next five years employment is not expected to increase at all, and is projected to decline by a total of 7,200 jobs.

Air transportation had been heady with growth over the last eight years. The expansion of Delta Air Lines and Comair at the northern Kentucky hub, and the boost from the UPS expansion in Louisville had caused this sector to grow on an average by 12.7 percent annually. The massive slowdown in the national economy has resulted in cost-cutting measures, which include less air travel and less commerce in general. Even after accounting for the Comair strike in early summer this sector has shrunk by 2.4 percent from last year. Other components of the transportation, communications, and public utilities include trucking and rail transportation, as well as telecommunications. Each of these is expected to shrink during the next two years, before rebounding in 2003.

The service sector comprises 26 percent of Kentucky's employment base. It is by far the largest sector and has grown rapidly even during the current slowdown. More than half the current employment base of 491,000 in the service sector is related to business and health services. Business services range from advertising to computer programming. In spite of the failing economy these have grown by 6.5 percent during 2001, and are forecasted to grow at a slightly higher rate during the next five years. Health services have shown steady growth of 2.2 percent over the last decade, and are expected to grow at 2.5 percent over the next five years.

Employment in Kentucky
CONTROL Scenario: July 2001

	1998	1999	2000	2001	2002	2003	2004	2005
Thousands of Persons								
Total Nonagricultural	1,752.9	1,795.6	1,825.0	1,839.6	1,852.5	1,884.4	1,924.3	1,964.6
Contract Construction	83.6	86.5	87.4	86.6	81.8	80.2	79.9	79.4
Mining	22.9	21.5	19.6	19.0	17.4	16.5	15.9	15.2
Manufacturing	320.3	320.8	321.9	310.1	307.2	312.6	320.4	327.1
Nondurable Goods	132.5	127.6	125.9	124.0	123.5	124.9	126.4	127.7
Durable Goods	187.8	193.2	196.0	186.1	183.7	187.7	194.0	199.4
Transportation & Public Utilities	102.1	105.1	108.7	108.3	106.1	106.1	107.5	109.6
Trade	416.9	427.1	430.4	443.1	446.2	452.2	462.1	472.5
Finance/Insurance/Real Estate	69.8	70.7	76.6	72.5	71.8	72.1	72.3	72.4
Services	442.7	462.7	471.8	491.3	513.0	533.5	552.1	571.3
Total Government	294.7	301.2	308.7	308.7	308.9	311.2	314.2	317.2
Federal Government	37.1	37.0	38.7	36.8	36.9	36.9	37.0	37.0
State & Local Government	257.6	264.5	268.7	271.9	272.0	274.3	277.3	280.2
Annual Percentage Change								
Total Nonagricultural	2.4	2.4	1.6	0.8	0.7	1.7	2.1	2.1
Contract Construction	2.1	3.5	1.0	-0.9	-5.5	-2.0	-0.4	-0.6
Mining	-1.1	-6.1	-8.8	-2.9	-8.3	-5.2	-4.0	-4.3
Manufacturing	1.1	0.2	0.3	-3.6	-0.9	1.7	2.5	2.1
Nondurable Goods	-2.2	-3.7	-1.3	-1.5	-0.4	1.1	1.2	1.0
Durable Goods	3.6	2.9	1.4	-5.0	-1.3	2.2	3.4	2.8
Transportation & Public Utilities	5.2	2.9	3.4	-0.3	-2.0	0.0	1.3	1.9
Trade	1.8	2.5	0.8	2.9	0.7	1.3	2.2	2.3
Finance/Insurance/Real Estate	0.9	1.3	8.3	-5.3	-0.9	0.3	0.2	0.2
Services	4.6	4.5	2.0	4.1	4.4	4.0	3.5	3.5
Total Government	1.3	2.2	2.5	0.0	0.1	0.8	1.0	0.9
Federal Government	-2.5	-0.2	4.7	-5.1	0.3	0.1	0.1	0.1
State & Local Government	1.9	2.7	1.6	1.2	0.0	0.9	1.1	1.1

Selected U.S. and Kentucky Economic Indicators
CONTROL Scenario: July 2001

	1998	1999	2000	2001	2002	2003	2004	2005
OUTPUT								
US Real GDP (Bil 92$)	8,515.6	8,875.7	9,318.5	9,468.3	9,713.4	10,062.3	10,370.1	10,712.3
% chg	4.4	4.2	5.0	1.6	2.6	3.6	3.1	3.3
Industrial Production Index, Manufacturing (%)	5.5	4.8	6.0	-3.2	1.9	4.8	3.7	3.3
Industrial Production Index, Durables (%)	9.1	8.2	10.0	-3.2	1.5	6.0	5.4	4.6
INCOME								
KY Personal Income (Mil$)	87,965	92,000	98,024	101,279	105,463	111,300	117,271	123,566
% chg	6.1	4.6	6.5	3.3	4.1	5.5	5.4	5.4
KY Per Capita Personal Income ($)	22,457	23,338	24,710	25,383	26,274	27,563	28,877	30,241
% of U.S. Per Capita Income	82.3	81.9	82.3	81.4	81.0	81.1	81.4	81.6
US Personal Income (Bil$)	7,391	7,790	8,282	8,679	9,104	9,630	10,138	10,682
% chg	6.5	5.4	6.3	4.8	4.9	5.8	5.3	5.4
US Per Capita Personal Income ($)	27,292	28,508	30,040	31,198	32,436	34,007	35,491	37,077
EMPLOYMENT								
KY Nonagricultural Employment (Thous)	1,752.9	1,795.6	1,825.0	1,839.6	1,852.5	1,884.4	1,924.3	1,964.6
% chg	2.4	2.4	1.6	0.8	0.7	1.7	2.1	2.1
US Nonagricultural Employment (Mil)	125.8	128.8	131.8	132.5	133.3	135.1	137.1	139.2
% chg	2.6	2.3	2.3	0.6	0.6	1.4	1.5	1.5
KY Manufacturing Employment (Thou)	320.3	320.8	321.9	310.1	307.2	312.6	320.4	327.1
% chg	1.1	0.2	0.3	-3.6	-0.9	1.7	2.5	2.1
US Manufacturing Employment (Mil)	18.8	18.5	18.5	17.7	17.1	17.2	17.3	17.4
% chg	0.7	-1.4	-0.4	-4.0	-3.7	0.8	0.7	0.2
OTHER KEY MEASURES								
CPI, Rate of Inflation (%)	1.5	2.2	3.4	3.2	2.4	2.4	2.3	2.4
3-month Treasury Bill Rate (%)	4.8	4.6	5.8	3.9	3.7	4.1	4.4	4.7
Oil Price, average composite ($/barrel)	12.6	17.4	28.2	25.2	24.8	23.4	22.1	21.2